

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/820,467

Source: IFWO

Date Processed by STIC: 11-15-04

# ***ENTERED***



IFWO

## RAW SEQUENCE LISTING

DATE: 11/15/2004

PATENT APPLICATION: US/10/820,467

TIME: 14:06:10

Input Set : A:\A-71431-4.ST25.txt

Output Set: N:\CRF4\11152004\J820467.raw

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3 <110> APPLICANT: Aguinaldo, Anna Marie
4     Beyna, Amelia Joy
5     Cho, Ho Sung
6     Desjarlais, John Rudolph
7     Marshall, Shannon Alicia
8     Muchhal, Umesh
9     Villegas, Michael Francis Aquino
10    Zhukovsky, Eugene
11    Quesenberry, Michael Stephen
13 <120> TITLE OF INVENTION: INTERFERON VARIANTS WITH IMPROVED PROPERTIES
15 <130> FILE REFERENCE: A-71431-4
17 <140> CURRENT APPLICATION NUMBER: US 10/820,467
18 <141> CURRENT FILING DATE: 2004-03-30
20 <150> PRIOR APPLICATION NUMBER: US 60/477,246
21 <151> PRIOR FILING DATE: 2003-06-10
23 <150> PRIOR APPLICATION NUMBER: US 60/415,541
24 <151> PRIOR FILING DATE: 2002-10-01
26 <150> PRIOR APPLICATION NUMBER: US 60/489,725
27 <151> PRIOR FILING DATE: 2003-07-24
29 <150> PRIOR APPLICATION NUMBER: US 10/676,705
30 <151> PRIOR FILING DATE: 2003-09-30
32 <160> NUMBER OF SEQ ID NOS: 274
34 <170> SOFTWARE: PatentIn version 3.2
36 <210> SEQ ID NO: 1
37 <211> LENGTH: 189
38 <212> TYPE: PRT
39 <213> ORGANISM: Homo sapiens
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43 Met Ala Ser Pro Phe Ala Leu Leu Met Val Leu Val Val Leu Ser Cys
44 1           5           10           15
47 Lys Ser Ser Cys Ser Leu Gly Cys Asp Leu Pro Glu Thr His Ser Leu
48           20           25           30
51 Asp Asn Arg Arg Thr Leu Met Leu Leu Ala Gln Met Ser Arg Ile Ser
52           35           40           45
55 Pro Ser Ser Cys Leu Met Asp Arg His Asp Phe Gly Phe Pro Gln Glu
56           50           55           60
59 Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Pro Ala Ile Ser Val Leu
60 65           70           75           80
63 His Glu Leu Ile Gln Gln Ile Phe Asn Leu Phe Thr Thr Lys Asp Ser
64           85           90           95
67 Ser Ala Ala Trp Asp Glu Asp Leu Leu Asp Lys Phe Cys Thr Glu Leu
68           100          105          110
71 Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Met Gln Glu Glu Arg

```

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72          115          120          125
75 Val Gly Glu Thr Pro Leu Met Asn Ala Asp Ser Ile Leu Ala Val Lys
76          130          135          140
79 Lys Tyr Phe Arg Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
80 145          150          155          160
83 Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Leu Ser
84          165          170          175
87 Leu Ser Thr Asn Leu Gln Glu Arg Leu Arg Arg Lys Glu
88          180          185
91 <210> SEQ ID NO: 2
92 <211> LENGTH: 165
93 <212> TYPE: PRT
94 <213> ORGANISM: Homo sapiens
96 <400> SEQUENCE: 2
98 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
99 1          5          10          15
102 Leu Leu Ala Gln Met Arg Lys Ile Ser Leu Phe Ser Cys Leu Lys Asp
103          20          25          30
106 Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
107          35          40          45
110 Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
111          50          55          60
114 Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
115 65          70          75          80
118 Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
119          85          90          95
122 Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
123          100          105          110
126 Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
127          115          120          125
130 Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
131          130          135          140
134 Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
135 145          150          155          160
138 Leu Arg Ser Lys Glu
139          165
142 <210> SEQ ID NO: 3
143 <211> LENGTH: 166
144 <212> TYPE: PRT
145 <213> ORGANISM: Homo sapiens
147 <400> SEQUENCE: 3
149 Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
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153 Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
154          20          25          30
157 Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
158          35          40          45
161 Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
162          50          55          60

```

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165 Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
166 65 70 75 80
169 Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
170 85 90 95
173 Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
174 100 105 110
177 Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
178 115 120 125
181 Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
182 130 135 140
185 Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
186 145 150 155 160
189 Ser Leu Arg Ser Lys Glu
190 165
193 <210> SEQ ID NO: 4
194 <211> LENGTH: 189
195 <212> TYPE: PRT
196 <213> ORGANISM: Homo sapiens
198 <400> SEQUENCE: 4
200 Met Ala Leu Ser Phe Ser Leu Leu Met Ala Val Leu Val Leu Ser Tyr
201 1 5 10 15
204 Lys Ser Ile Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
205 20 25 30
208 Gly Asn Arg Arg Ala Leu Ile Leu Leu Ala Gln Met Gly Arg Ile Ser
209 35 40 45
212 His Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Glu Glu
213 50 55 60
216 Glu Phe Asp Gly His Gln Phe Gln Lys Ala Gln Ala Ile Ser Val Leu
217 65 70 75 80
220 His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Glu Asp Ser
221 85 90 95
224 Ser Ala Ala Trp Glu Gln Ser Leu Leu Glu Lys Phe Ser Thr Glu Leu
225 100 105 110
228 Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Glu Val Gly
229 115 120 125
232 Val Glu Glu Thr Pro Leu Met Asn Glu Asp Ser Ile Leu Ala Val Arg
233 130 135 140
236 Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
237 145 150 155 160
240 Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Leu Ser
241 165 170 175
244 Phe Ser Thr Asn Leu Gln Lys Arg Leu Arg Arg Lys Asp
245 180 185
248 <210> SEQ ID NO: 5
249 <211> LENGTH: 189
250 <212> TYPE: PRT
251 <213> ORGANISM: Homo sapiens
253 <400> SEQUENCE: 5
255 Met Ala Leu Pro Phe Val Leu Leu Met Ala Leu Val Val Leu Asn Cys

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Input Set : A:\A-71431-4.ST25.txt

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256 1          5          10          15
259 Lys Ser Ile Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
260          20          25          30
263 Ser Asn Arg Arg Thr Leu Met Ile Met Ala Gln Met Gly Arg Ile Ser
264          35          40          45
267 Pro Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu
268          50          55          60
271 Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Gln Ala Ile Ser Val Leu
272 65          70          75          80
275 His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asp Ser
276          85          90          95
279 Ser Ala Thr Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu
280          100          105          110
283 Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Met Met Gln Glu Val Gly
284          115          120          125
287 Val Glu Asp Thr Pro Leu Met Asn Val Asp Ser Ile Leu Thr Val Arg
288          130          135          140
291 Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
292 145          150          155          160
295 Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser
296          165          170          175
299 Leu Ser Ala Asn Leu Gln Glu Arg Leu Arg Arg Lys Glu
300          180          185
303 <210> SEQ ID NO: 6
304 <211> LENGTH: 189
305 <212> TYPE: PRT
306 <213> ORGANISM: Homo sapiens
308 <400> SEQUENCE: 6
310 Met Ala Leu Pro Phe Ala Leu Leu Met Ala Leu Val Val Leu Ser Cys
311 1          5          10          15
314 Lys Ser Ser Cys Ser Leu Asp Cys Asp Leu Pro Gln Thr His Ser Leu
315          20          25          30
318 Gly His Arg Arg Thr Met Met Leu Leu Ala Gln Met Arg Arg Ile Ser
319          35          40          45
322 Leu Phe Ser Cys Leu Lys Asp Arg His Asp Phe Arg Phe Pro Gln Glu
323          50          55          60
326 Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Glu Ala Ile Ser Val Leu
327 65          70          75          80
330 His Glu Val Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asp Ser
331          85          90          95
334 Ser Val Ala Trp Asp Glu Arg Leu Leu Asp Lys Leu Tyr Thr Glu Leu
335          100          105          110
338 Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Met Gln Glu Val Trp
339          115          120          125
342 Val Gly Gly Thr Pro Leu Met Asn Glu Asp Ser Ile Leu Ala Val Arg
343          130          135          140
346 Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
347 145          150          155          160
350 Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser

```

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Input Set : A:\A-71431-4.ST25.txt

Output Set: N:\CRF4\11152004\J820467.raw

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351          165          170          175
354 Ser Ser Arg Asn Leu Gln Glu Arg Leu Arg Arg Lys Glu
355          180          185
358 <210> SEQ ID NO: 7
359 <211> LENGTH: 189
360 <212> TYPE: PRT
361 <213> ORGANISM: Homo sapiens
363 <400> SEQUENCE: 7
365 Met Ala Arg Ser Phe Ser Leu Leu Met Ala Val Leu Val Leu Ser Tyr
366 1          5          10          15
369 Lys Ser Ile Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
370          20          25          30
373 Arg Asn Arg Arg Ala Leu Ile Leu Leu Ala Gln Met Gly Arg Ile Ser
374          35          40          45
377 Pro Phe Ser Cys Leu Lys Asp Arg His Glu Phe Arg Phe Pro Glu Glu
378          50          55          60
381 Glu Phe Asp Gly His Gln Phe Gln Lys Thr Gln Ala Ile Ser Val Leu
382 65          70          75          80
385 His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Glu Asp Ser
386          85          90          95
389 Ser Ala Ala Trp Glu Gln Ser Leu Leu Glu Lys Phe Ser Thr Glu Leu
390          100         105         110
393 Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Glu Val Gly
394          115         120         125
397 Val Glu Glu Thr Pro Leu Met Asn Glu Asp Phe Ile Leu Ala Val Arg
398          130         135         140
401 Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
402 145         150         155         160
405 Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser
406          165         170         175
409 Phe Ser Thr Asn Leu Lys Lys Gly Leu Arg Arg Lys Asp
410          180         185
413 <210> SEQ ID NO: 8
414 <211> LENGTH: 189
415 <212> TYPE: PRT
416 <213> ORGANISM: Homo sapiens
418 <400> SEQUENCE: 8
420 Met Ala Leu Thr Phe Tyr Leu Met Val Ala Leu Val Val Leu Ser Tyr
421 1          5          10          15
424 Lys Ser Phe Ser Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
425          20          25          30
428 Gly Asn Arg Arg Ala Leu Ile Leu Leu Ala Gln Met Arg Arg Ile Ser
429          35          40          45
432 Pro Phe Ser Cys Leu Lys Asp Arg His Asp Phe Glu Phe Pro Gln Glu
433          50          55          60
436 Glu Phe Asp Asp Lys Gln Phe Gln Lys Ala Gln Ala Ile Ser Val Leu
437 65          70          75          80
440 His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asp Ser
441          85          90          95

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RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/820,467

DATE: 11/15/2004  
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Input Set : A:\A-71431-4.ST25.txt  
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**Invalid <213> Response:**

Use of "Artificial" only as "<213> Organism" response is incomplete,  
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

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Seq#:85,86,87,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107  
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Seq#:171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188  
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Seq#:267,269,271,274

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/820,467

DATE: 11/15/2004

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Input Set : A:\A-71431-4.ST25.txt

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